L 19672-65 EWT(m)/EPF(c)/EPF(n)-2/EPR Pr-4/Ps-4/Pu-4 AEDC(b)/SSD/BSD/AFWL
ACCESSION NR: AP4045664 P/0048/64/009/07-/0539/0550

AUTHOR: Adamski, L.; Bajbor, Z.(Bavbor, Z.); Dabek, W.(Dombek, V.); Rozel, J.(Rozel, Ye.); Suwalski, W.(Suval'ski, V.)

TITLE: Critical and exponential assemblies at the Institute of Nuclear Research (Swierk)

SOURCE: Nukleonika, v. 9, no. 7-8, 1964, 539-550

TOPIC TAGS: reactor physics, Poland, ANNA, MARYLA, HELENA, reactor engineering

ABSTRACT: Reactor physics investigations in the Institute of Nuclear Research at Swierk (Poland) are conducted mainly by means of two critical assemblies ANNA and MARYLA and also the subcritical assembly HELENA. ANNA, which was first critical in June 1963, is a graphite-[illegible] water moderated assembly fueled with 2% enriched UO2, designed primarily as a mock-up of the high-flux reactor. MARYLA, which was first critical in December 1963, is a modified [illegible] reactor designed for investigating light water systems; its design and control system are flexible so they can be easily adapted to

Card 1/3

L 19672-65
ACCESSION NR: AP4045664

various types and geometries of critical water assemblies. HELENA, which was put into operation in November 1963, is a natural uranium-graphite exponential assembly. The paper presents a short technical description and the physical characteristics, also several illustrations and cross-sections of the assemblies. These reactors are to be the main facilities for developing fundamental reactor physics in Poland. Theoretical and experimental studies are to be focused on determining macro- and microscopic parameters of various lattices, particular stress is given to pulse neutron techniques, and kinetic methods of investigation are to be used to determine thermal neutron cross-sections and resonance integrals of various reactor materials. Some effects connected with air gaps, core anisotropy, and the influence of assembly dimensions on the accuracy of buckling determinations are to be studied in HELENA. The reactors are also to be used in the cooperative NPY Project. Orig. art. has: 11 figures.

ASSOCIATION: Institute of Nuclear Research, Warszawa-Swierk

Card 2/3

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001654020017-5"

L 19672-65
ACCESSION NR: AP4045664

SUBMITTED: 00 ENCL: 00 SUB CODE: NP

NO REF SOV: 000 OTHER: 010

Card 3/3

SROCZYNSKI, Jan; ZURKOWSKI, Andrzej; SMIGLA, Krystyna; SUWALSKI, Zbigniew

A case of Lesniowski-Crohn disease with an atypical course and intestinal hemorrhage. Pol. arch. med. wewnet. 33 no.8: 973-977 '63.

1. Z II Kliniki Chorob Wewnetrznych Sl. AM w Zabrzu Kierownik: prof. dr med. W. Zahorski Z Zakladu Anatomii Patologicznej Sl. AM w Zabrzu Kierownik: prof. dr med. W. Niepolomski i z Zakladu Radiologii Sl. AM w Zabrzu p.o. Kierownika: dr med. H. Romanowski.
(ILEITIS, REGIONAL)
(HEMORRHAGE, GASTROINTESTINAL)
(AUTOPSY)

SUY, Kh. [Sui, H.]; IVANOV, Yu.V., doktor tekhn.nauk

System of round turbulent jets in a parallel flow. Eesti tead akad tehn fuus 11 no.2:83-89 '62.

1. Academy of Sciences of the Estonian S.S.R., Institute of Energetics.

IVANOV, Yu.V. (Tallin); SAAR, Yu.E. [Saar, J.E.] (Tallin); SUY, Kh.N. [Sui, H.N.] (Tallin).

Investigating the trajectory of circular turbulent jets developing in an organic lateral flow. Izv. AN SSSR. Otd. tekh. nauk no.3: 159-162 Mr '57. (MIRA 10:6)

(Jets--Fluid dynamics)

A Study of the Development of a Jet in a Co-Stream 23-58-2-6/9

ASSOCIATION: Institut energetiki Akademii nauk Estonskoy SSR (Institute of Power Engineering of the Academy of Sciences of the Estonian SSR)

SUBMITTED: Jan 21, 1958

Card 2/2 **1. Jets - Velocity 2. Jets - Properties - Testing equipment 3. Jets - Properties - Test results**

21313
S/023/60/000/004/003/005
D221/D305

26.3170

AUTHORS: Suy, Kh. N. and Ivanov, Yu.V., Doctor of Technical Sciences

TITLE: On the question of a jet flow in a mixed stream

PERIODICAL: Akademiya nauk Estonskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 4, 1960, 331-337

TEXT: In their previous work Yu.V. Ivanov and Kh.N. Suy (Ref. 1: Issledovaniye razvitiya strui v sputnom potoke (Research on the Development of a Jet Flow in a Mixed Stream), Izv. AN ESSR, Seriya Tekhn. i Fiz.-Mat., nauk, vol. VII, No. 2, 1958) and (Ref. 2: Issledovaniye razvitiya krugloy strui v nachalnom uchastke vstrechnoy strui bolshogo razmera (Research into the Development of a Cylindrical Jet in the Initial Sector of a Head-On Large Dimensional Jet), Izv. AN ESSR, Seriya Tekhn. i Fiz.-Mat. nauk, vol. VIII, No. 2, 1959), established the basic laws of extinction of the axial velocity of turbulent cylindrical and flat jets developing in a

Card 1/16

On the question of a jet ...

co-stream. Since in experiments with jets in co-streams it is impossible to obtain a constant profile of the main jet velocities along the whole of the jet cross-section, it has been thought useful, both from theoretical and practical points of view, to establish experimentally the relationship between the velocity profile in the vicinity of the nozzle and the laws governing the decay of the axial velocity of co-streams and the present article presents the results of this experiment. Velocities of the jet near the orifice were being changed artificially. It was determined that the basic parameter for isothermal streams is the parameter $\lambda = v_2/v_1$, where v_2 is the axial velocity of the stream at the orifice and v_1 is the average velocity of the co-stream. The experiments were carried out for streams of various dimensions. The ratios of the stream diameter D_s to the diameter of the nozzle orifice d or to the smaller dimension of a flat nozzle $2b_o$ have been

Card 2/16

On the question of a jet ...

where $\Delta v = v - v_1$ - the excess radial velocity of the jet with respect to the co-stream velocity at a given point of any cross-section; Δv_m - the excess axial velocity at any cross-section of the jet; z - distance from the axis to the given point and z_{av} distance from the axis to the point for which $\Delta v/\Delta v_m = 0.5$. The solid line on this graph represents the theoretical profile of the jet in a co-stream, corresponding to the law for velocity profile in the border zone of a jet

$$f(\eta) = (1 - \eta^{3/2})^2. \qquad (2)$$

First met in the work of H. Schlichting (Ref. 3: Ueber das ebene Windschatten-problem, Ing. - Arch. No. 5, 1930). According to G.N. Abramovich (Ref. 4: Teoriya turbulentnykh struy, Fizmatgiz, M. 1960) this law can be applied to facilitate further determination of the velocity profile of the jet in a co-stream; after transfor-

On the question of a jet ...

mations

$$\frac{\Delta v}{\Delta v_m} = \left[1 - \left(\frac{z}{b}\right)^{3/2}\right]^2 \qquad (3)$$

is obtained, where z - distance from the jet axis; b - half width of an arbitrary cross-section of the main region of the jet. Fig. 4 shows good agreement between the experiment and the theoretical profile for the whole region except for the region z/Z_{av} from 0 to 0.5, within the curve of the velocity profile of the jet, drawn from experimentally obtained data, lies somewhat above the theoretical one. Since experiments were carried out with jets of various diameters in co-streams having various velocity profiles at the nozzle, it was of interest to establish the influence of the above conditions in the decay of axial velocities of jet flows. The results are presented graphically in Fig. 5, in which the decays of jet velocity of various diameters are compared for two values of

Card 5/16

21313
S/023/60/000/004/003/005
D221/D305

λ (5.08 and 13.1). As in all other cases, experimental and theoretical points are in good agreement. It follows that the usually observed irregularities in the velocity profiles of the co-stream at the orifice of the nozzle do not substantially interfere with the mechanism of development of the jet with basic section. It also shows that irregularities in the velocity profiles near the wall of the nozzle orifice do not influence the law of decay of axial velocity, and the similar development of velocity fields at various jet cross-sections and do not influence the boundaries of the jet flow. It is stated in conclusion that the monograms and formulae given by the authors in their previous works (Refs. 1 and 2: Op.cit.) for determining the decay of the axial velocity of the jet flow in a co-stream are, therefore, of a general character. There are 6 figures, 1 table and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc.

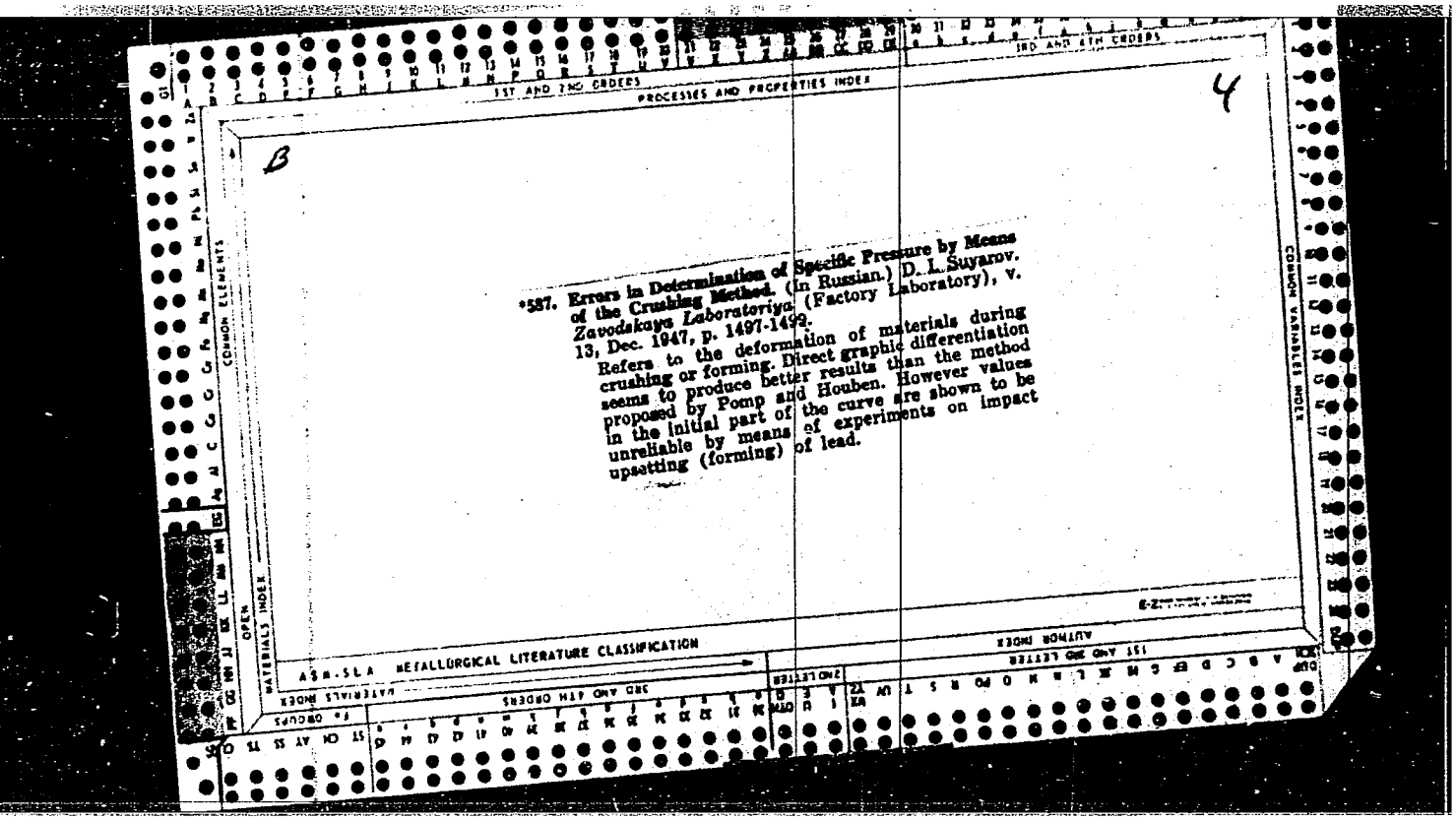
ASSOCIATION: Institut energetiki, akademii nauk Estonskoy, SSR (Academy of Sciences of the Estonian SSR, Institute of Energetics)

SUBMITTED: June 1, 1960

SUYARKO, L.A.

TARASENKO, Vasiliy Akimovich; SUYARKO, L.A., kand.istor.nauk, otvetstvennyy red.; GERMAN, M.A., red.; KHOKHANOVSKAYA, T.I., tekhn.red.

[Atomic problem in the foreign policy of the United states, 1945-1949] Atomnaia problema vo vneshnei politike SShA (1945-1949 gg.). [Kiev] izd-vo Kievskogo gos.univ. im. T.G.Shevchenko, 1958. 243 p. (MIRA 11:7)
(United States-- Foreign relations)
(Atomic weapons)

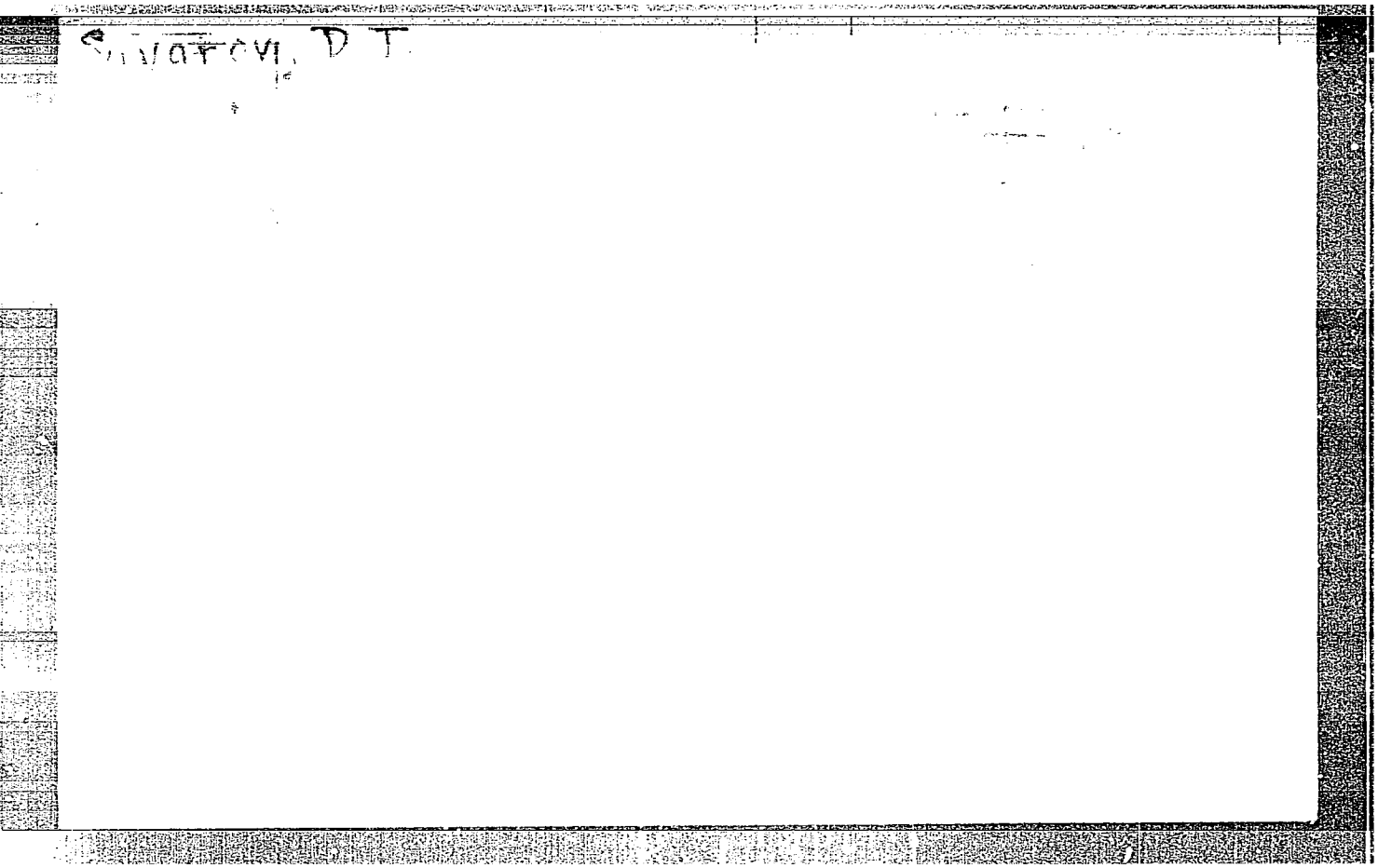


*587. **Errors in Determination of Specific Pressure by Means of the Crushing Method.** (In Russian.) D. L. Suyarov. *Zavodskaya Laboratoriya* (Factory Laboratory), v. 13, Dec. 1947, p. 1497-1499.

Refers to the deformation of materials during crushing or forming. Direct graphic differentiation seems to produce better results than the method proposed by Pomp and Houben. However values in the initial part of the curve are shown to be unreliable by means of experiments on impact upsetting (forming) of lead.

SUYAROV, D. I.

"Problem of the Action of Speed of Plastic Deformation on Resistance," Zhur. Tekh. Fiz., 18, No. 7, 1948. Mbr., Ural Sci. Res. Inst. Ferrous Metals, -c1948-.



Suyarov, D. I.

"On the Possibility of Using the Law of Minimum Energy to Determine the Stretch During Irregular Reduction", Obrabotka Metallov Davleniyem, Sbornik Statey, Vol 4, Edited by N. P. Grom, Metallurgizdat, 1956.

SUYARKO, D.I.; ZASUKHA, F.P.

Effect of the design and the temperature of rolls on sheet fusion during back rolling. Stal' 16 no.10:901-904 O '56. (MLRA 10:9)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.
(Rolling (Metalwork))

137-58-6-12141

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 138 (USSR)

AUTHORS: Shadrin, V.A., Suyarov, D.I., Skryabin, N.P.

TITLE: Specific Pressures Encountered in Rolling of Metal in Blooming Mills (Udel'nyye davleniya pri prokatke na blyuminge)

PERIODICAL: Byul. nauchno-tekhn. inform. Ural'skiy n.-i. in-t chernykh metallov, 1957, Nr 3, pp 109-113

ABSTRACT: A presentation of results of experiments on the determination of pressures (P) exerted by the metal against the rolls of a Model-850 blooming mill equipped with five sets of grooves. Ingots of U12A, S 60, 12 MKh, and 27SG steel, heated to a temperature of 1200-1300°C, were rolled in 25 passes into blooms with a cross section of 185 x 185 mm (10 passes through the first set of grooves, six passes each through the second and third sets, two in the fourth, and one in the fifth set). The P's were determined with the aid of dynamometers with wire gages mounted under the pressure screws; in the first 16 passes the P was measured on the left dynamometer, while the right dynamometer was employed in all subsequent passes. It has been established that at temperatures between

Card 1/2

137-58-6-12141

Specific Pressures Encountered in Rolling of Metal in Blooming Mills

1100° and 1050° the specific P's, 3-9 kg/mm^2, exerted against the rolls by various types of steel investigated, are greatly dependent on the temperature of the ingots and on the temperature drop between the surface and the core of the ingots.

M.Z.

1. Metals--Processing 2. Pressure--Determination 3. Roling mills--Equipment

Card 2/2

25(1) PHASE I BOOK EXPLOITATION SOV/1533

Suyarov, Dmitriy Il'ich

Profilirovka i shlifovka listoprokatnykh valkov (Body Form Design and Grinding of Plate Mill Rolls) Sverdlovsk, Metallurgizdat, 1958. 60 p. 2,700 copies printed.

Ed.: M.A. Benyakovskiy; Ed. of Publishing House: V.P. Kel'nik; Tech. Ed.: Ye. M. Zef.

PURPOSE: This booklet is intended for the engineering staffs of plate rolling mills. It can also be used as a textbook for training of roll grinder operators.

COVERAGE: Methods of body design of plate mill rolls are examined. A description of roll grinder construction and the kinematics of crowning devices is presented. The machining technique of rolls, methods of checking their form and the basic instructions for maintenance and for keeping operating records of rolls are explained in detail. No personalities are mentioned. There are

Card 1/3

Body Form Design and Grinding of Plate (Cont.) SOV/1533

20 references, of which 15 are Soviet, 3 English and 2 German

TABLE OF CONTENTS:

Card 2/3

'Body Form Design and Grinding of Plate (Cont.) SOV/1533

Ch. IV. Maintenance and Keeping Inventory and Operating Records of Rolls

AVAILABLE: Library of Congress

GO/jmr
5-21-59

Card 3/3

18.5100

75961
SOV/133-59-10-22/39

AUTHORS: Suyarov, D. I., Glushkov, A. I., Komova, N. F.

TITLE: Improvements of Surface Quality of Sheets in Pack Rolling

PERIODICAL: Stal', 1959, Nr 10, pp 923-925 (USSR)

ABSTRACT: Investigations conducted by Bel'chenko, G. I., and Ivanov, S. N. [Ref 1, Stal', 1955, Nr 2] on the mechanisms of the formation of local projections on the rolls which pick up metal particles causing subsequent sheet defects are of some interest, although the authors repudiate some of the statements. Based on an improvement adopted in England [Ref 2, Mort, I., "Iron and Steel"], bottom rolls at Lys'va Plant (Lys'venskiy zavod) are provided with 0.30- to 0.35-mm high collars to eliminate the contact of roll surfaces, which according to Bel'chenko and Ivanov [Ref 1] cause the defects. The roll collars improve biting conditions and decrease the picking up of metal particles. At Lys'va Plant these local projections are removed by a continuous

Card 1/4

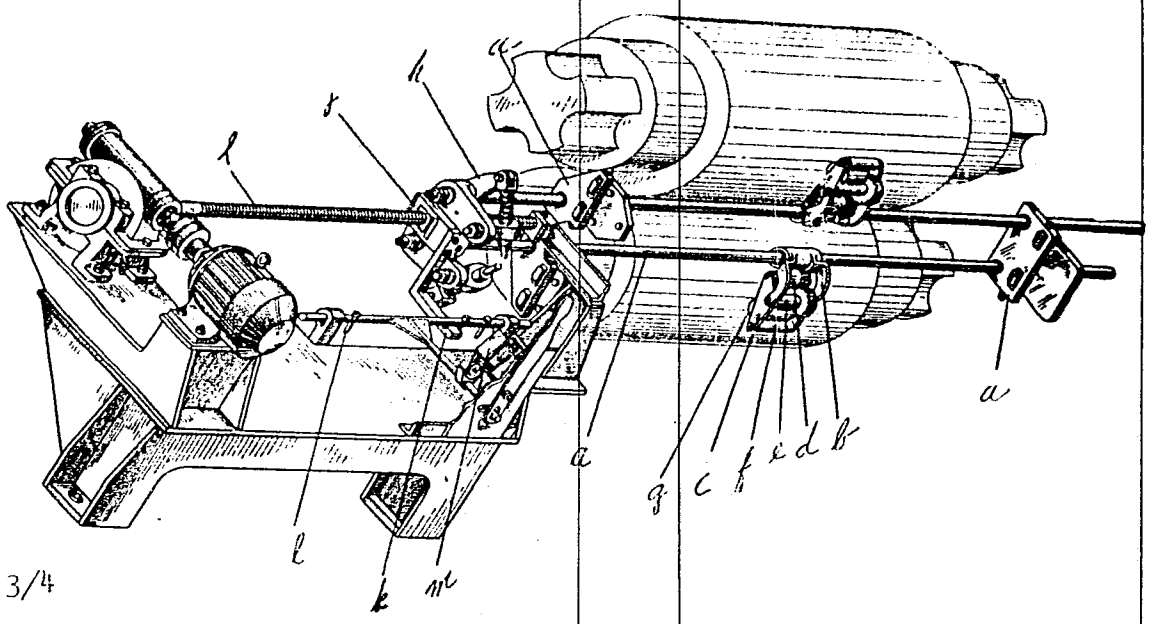
grinding attachment (see Fig. 2) which is endowed with the following features: (1) abrasive rolls which turn independently of the working rolls; (2) rods (a) which support carriage and (b) with abrasive rolls mounted in such a way as not to damage drive parts in case of their breaking down; and (3) abrasive dust removal by compressed air jet passed through hollow rods (a). The arrangement is recommended for introduction in other plants. There are 2 figures; and 5 references, 3 Soviet, 1 British, 1 U.S. The British reference is: Mort, I., Iron and Steel, 1958, Nr 10. The U.S. reference is: Griffith, Blast Furnace and Steel Plant, 1939, Nr 9.

(caption to Fig. 2--for which, see card 3/3)

Fig. 2. Continuous grinding attachment of the rolls during rolling: (a) rod; (b) carriage; (c) frame; (d) friction roll; (e) drive roll; (f) idle roll; (g) abrasive roll; (h) lever; (i) screw; (j) crossbeam; (k) arm; (l) stops; (m) switch; (n) planks.

Improvements of Surface Quality of Sheets in Pack Rolling
(see card 2/4 for caption to Fig. 2, below)

75961
SOV/133-59-10-22/39



Card 3/4

Improvements of Surface Quality of Sheets in Pack Rolling

75961
SOV/133-59-10-22/30

ASSOCIATION: [illegible]

Card 4/4

S/137/61/000/007/025/072
A060/A101

AUTHORS: Benyakovskiy, M. A.; Suyarov, D. I.; Volegov, V. P.

TITLE: Calculation of reduction schedules and of roll profile for coil rolling mills

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1961, 8, abstract 7D47 ("Tr. Konferentsii: Tekhn. progress v tekhnol. prokatn. proiz-va". Sverdlovsk, Metallurgizdat, 1960, 440-448)

TEXT: An equation for the roll profile and an equation expressing the linear dependence between the rolling stress and the strip thickness (the line of equal relative reduction) are derived on the basis of the condition for uniform reduction in width of a strip. A graphical method is proposed for determining the reduction schedule for cold rolling of tapes with thickness 0.28 mm from strip steel 08кп (08kp) with initial dimensions 2.2 x 735 mm. The method is based on the simultaneous solution of the lines of equal relative reduction in strip width and the reduction curves.

V. Pospekhov

[Abstracter's note: Complete translation]

Card 1/1

SUYAROV, D.I.; GLUSHKOV, A.I.

Modernizing the screwdown gear on thin-sheet duo mills. Biul. TSIICHM no.10:37-38 '60. (MIRA 15:4)

1. Ural'skiy institut chernykh metallov (for Suyarov). 2. Lys'venskiy metallurgicheskiy zavod (for Glushkov).
(Rolling mills--Equipment and supplies)

22317
S/133/61/000/004/006/015
A054/A127

1.1300 1496, 1413, 1454

AUTHORS: Suyarov, D. I., Candidate of Technical Sciences; Benyakovskiy, M. A., Engineer, and Chubrikov, L. G., Engineer

TITLE: Certain characteristics of rolling between rolls pressed together beforehand

PERIODICAL: Stal', 1961, no. 4, 336 - 339

TEXT: When rolling thin strips on rolls which have been pressed together before the strip enters the mill, the edges of the roll-bodies remain, in some cases, in contact with each other during rolling. The calculations referring to the forces active in this process on the plastic deformation of the stand, the relation between these forces and the thickness of the outgoing strip, as well as the experience gained, all show that the stability of the stand is greater when the edges of the rolls are in contact during the rolling process than when there is a gap between the roll-bodies. When operating with the edges of roll-bodies in contact, greater accuracy is obtained, thinner strips are produced, with the same pressure as on used conventional roll stands. It is also possible to increase the accuracy of

Card 1/3

Certain characteristics of rolling between...

the strip thickness without having to readjust the rolls during the process. This method is, in fact, used already to roll foils with tolerances of the order of microns, (Ref. 5: I. A. Voronov, S. N. Chernyak, et al., Tsvetnyye metally, 1957, no. 5). The same advantages may be achieved for rolling thicker strips also. In this case the contact between the roll-barrels is effected by flanges mounted at the barrel-edges. The equations used in calculating various factors of the rolling process with the roll-edges in contact, can be used for this case as well, by replacing the value of the barrel-length by that of the flange-width. The graphical representation of rolling strips with flanged rolls shows that the disconnection of the flanges takes place at a greater thickness of the outgoing strip the narrower the strip and the greater the compression of the rolls. There are 2 figures and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Ural'skiy filial AN SSSR (Ural Branch of the Academy of Sciences USSR) and Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov (Ural Scientific Research Institute of Ferrous Metals)

Investigation of the resistance ...

ber of Ti alloys were plotted. The conditions for cold-rolling Ti alloys were also studied and the parameters of rolling, pressure, stress and roll and reeler speeds were determined. The total pressure of the metals on the rolls and the forward and rear stresses in strip rolling were calculated. The authors conclude that in spite of the moderate plasticity exhibited by some of the new high-strength titanium alloys during reduction, high reductions in area are possible in the rolling of strip under stress owing to the favorable influence of the stressed state. Reductions of 20 - 30% depending on the type of alloy, are possible. The alloys in question were ИМП-2 (IMP2) and ИМП-3 (IMP3), produced by vacuum arc melting of the alloys АТ3 (AT3), AT4 and AT8. There are 6 figures and 1 table.

Card 2/2

SUYAROV, D.I.; SHILOV, V.I.; ODINOKOVA, L.P.; ABDULOV, Yu.P.

Determining the curves of metal hardening by compression. Trudy Inst.met.UFAN SSSR no.9:5-11 '52. (MIRA 16:10)

SUYAROV, D.I.; SIROTIN, M.I.

Formula for converting the amount of deformation in specimen compression to the amount of deformation in strip rolling. Trudy Inst.met.UFAN SSSR no.9:13-16 '62. (MIRA 16:10)

CHUBRIKOV, L.G.; SUYAROV, D.I.; SIROTIN, M.I.

Measuring forces in rolling on plate mills. Trudy Inst.mat.UFAN SSSR no.9:17-26 '62.

Algorithm of the control of the screw-down mechanism on plate mills. 35-40

Principles of calculating diagonal rolling. 41-48 (MIRA 16:10)

CHUBRIKOV, L.G.; SIROTIN, M.I.; SUYAROV, D.I.; Prinimali uchastiye:
KAYURIN, V.P.; PROKHOROV, V.S.

Investigating reduction conditions on plate mills at the Asha metallurgical plant. Trudy Inst.met.UFAN SSSR no.9:27-33 '62. (MIRA 16:10)

KORZH, V.P.; SUYAROV, D.I.

Measurement of rolling moments. Trudy Inst.met.UFAN SSSR no.9: 61-62 '62. (MIRA 16:10)

SUYAROV, D.I.; KORZH, V.P.; SHILOV, V.I.

Using glass as a metalworking lubricant during hot rolling.
Trudy Inst.met.UFAN SSSR no.9:83-86 '62. (MIRA 16:10)

S/279/63/000/001/002/023
E193/E383

AUTHORS: Chubrikov, L.G., Suyarov, D.I. and Sirotin, M.I. (Sverdlovsk)

TITLE: Determination of roll pressure in studies of stands for rolling thick plate

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Metallurgiya i gornoye delo. no. 1, 1963, 22 - 25

TEXT: In normal rolling practice the magnitude of the roll pressure p_i in any given pass necessary for establishing the optimum rolling schedule is calculated from the standard formula:

$$p_i = \frac{P_i}{b_i \sqrt{r \Delta h_i}} \qquad (1)$$

where P_i is the roll force, b_i the width of the plate in contact with the roll and $\Delta h_i = h_{i-1} - h_i$ the absolute reduction per pass (h_{i-1} and h_i being the starting and final thickness

Determination of ....

of the plate). This formula cannot be used in diagonal rolling in which b_i is not constant. An expression for p_i in which b_i does not appear was determined by integrating:

$$dA = p \cdot b \cdot d\ell \cdot \Delta h \qquad (3)$$

where dA is work done in deforming an elementary volume measuring b x $d\ell$ x Δh. The integral of Eq. (3) and the equation:

$$A = \int_0^{\Phi} M_{def} \cdot d\varphi \qquad (5)$$

where Φ is the angular displacement of the roll in one pass (radians), $d\varphi$ an elementary angle of rotation of the roll (radians) and $M_{def} = 2P\varkappa\sqrt{r \cdot \Delta h}$ is the rolling moment required to deform the metal, $\varkappa$ denoting the coefficient dependent on the location on the arc of contact of the point at which the roll force is applied, were combined to produce the final formula:

Card 2/4

Determination of ....

$$p_i = \frac{h_i}{V}\sqrt{\frac{r}{\Delta h_i}}\int_0^{\varphi_i} P_i \cdot d\varphi \qquad (8)$$

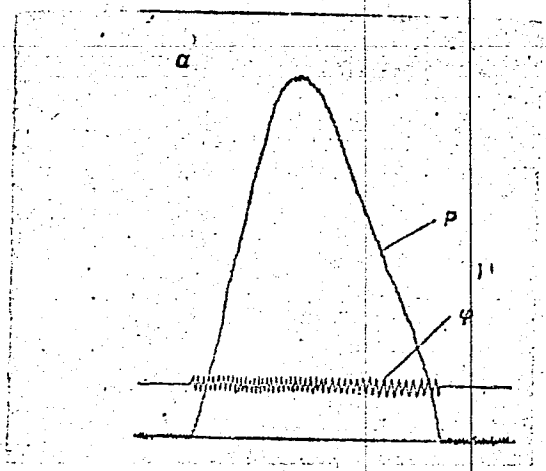
where V is the volume of the metal. To calculate p_i from Eq. (8) it is necessary to know the magnitude of $\int_0^{\varphi} P.d\varphi$, which can be determined experimentally by obtaining an oscillogram such as shown in the figure (a) and calculating the area between the curves relating to P and φ. The applicability of formula (8) was checked experimentally in rolling a 5.95 ton slab of steel 3 to 16 x 2320 x 8000 mm plate. The results obtained were in close agreement with those yielded by Eq. (1).
There are 1 figure and 1 table.

Card 3/4

Determination of ....

S/279/63/000/001/002/023
E193/E383

Figure a:



Card 4/4

SUYAROV, Dmitriy Il'ich; BENYAKOVSKIY, Mark Aleksandrovich; TRET'YAKOV, A.V. red.; VLADIMIROV, Yu.V., red. izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Quality of thin steel sheets] Kachestvo tonkikh stal'nykh listov. Moskva, Izd-vo Metallurgiia, 1964. 174 p. (MIRA 17:4)

LEVENETS, N.P.; SAMARIN, A.M.; SEMIKIN, I.D.; KAZAKOV, V.E.; BEMBINEK, Ye.I.; PANYUKHNO, L.G.; SVINOLOBOV, N.P.; AVERIN, S.I.; SMIRNOV, V.M.; ZELENSKIY, V.D.; LAYKO, B.G.; TISHCHENKO, O.I.; OKHRIMOVICH, B.P.; DANILOV, A.M.; TISHKOV, Yu.Ya.; PANOV, M.A.; MARKELOV, A.I.; PETROV, A.K.; VASILEVSKIY, P.A.; PASYUK, K.I.; NESTEROV, V.I.; KHRUSTAL'KOV, L.A.; GLAZKOV, V.S.; MAKAGON, V.G.; FOMIN, G.G.; TRISHCHENKO, V.D.; KORZH, V.P.; SUYAROV, D.I.; ARSEYEV, A.V.; PAVLYUCHENKO, A.A.; ZHADAYEV, V.G.; KONDORSKIY, R.I.; MOROZOVA, I.A.; KOCHETOV, V.V.; PRUZHINER, V.L.; MALEVICH, I.A.; MALIOVANOV, D.I.; ZAKOVRYASHIN, I.I.; NOVSKIY, I.S.; NOVIKOVA, V.P.; GRISHIN, K.N.; MOSKOVSKAYA, M.L.; KORNEYEV, B.M.

Inventions. Met. i gornorud. prom. no.3:75-76 My-Je '64.
(MIRA 17:10)

SUYAROV, D.I., kand.tekhn.nauk; MUSORIN, G.V., inzh.

Review of a book by N.F.Dubrov and N.I. Lapkin "Electrical steels." Stal' 24 no.6:547-548 Je '64. (MIRA 17:9)

1. Institut metallurgii v.g. Sverdlovske i Sredne-Ural'skiy sovet narodnogo khozyaystva.

CHERDYNTSEV, V.V.; SUYAROVA, O.V.

Investigation of the earth's neutron flux. AN Kazakh.SSR 1:166-171 '58. (Neutrons)

Trudy Inst.iad.fiz. (MIRA 12:2)

AUTHORS: Cherdyntsev, V.V., and Suyarova, O.V. SOV/11-59-2-9/14

TITLE: Some Data on the Influence of Geological Conditions on the Formation of the Earth's Neutron Flux (Nekotoryye dannyye o vliyanii geologicheskikh usloviy na formirovaniye neytronnogo potoka zemli)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 2, pp 115-118 (USSR)

ABSTRACT: The existance of the neutron flux in the Earth's crust is determined indirectly by numerous reactions of artificial transformations: 1) the accumulation of He^3 in the spodumenes for the count of splitting the lithium; 2) an artificial division of AcU with the formation of isotopes of krypton and xenon; 3) the accumulation of xenon in the ancient tellurous minerals, of argon and neon in the uraninites; 4) the formation of Pu^{239}, Np^{237} and other isotopes of the neptunian series in radioactive minerals. The formation of products of nuclear transformation cannot be explained uniquely by the presence in the minerals of radioactive elements capable of spontaneous splitting with the emission of neutrons. The main component of the neutron

Card 1/3

Investigating neutron radiation ...

tion the run of α-particles in the emulsion amounts to an average of 20 - 25 μ. It is estimated that one recorded α-particle corresponds to the passage of 160 neutrons through the emulsion. Data are given about the neutron flow at the ground surface and in subterranean workings, and considerations are expressed about the nature of this flow. The suggested method was employed in the study of the radiation of "anomalous" minerals, containing an elevated quantity of actinium. Molybdenum M-17(M-17), containing 6.8 x 10-6 g/g U and possessing an Ac/Ra ratio 9.4 times higher than in the usual equilibrium minerals, served as the main specimen of an anomalous mineral. It was established that anomalous minerals contain a considerable excess of particles with runs of less than 8 μ. Tracks of short-run particles, differing from those of α-particles in their greater width (up to 1.5 - 2 μ) and grain density, were detected as a result of investigating 2900 tracks of anomalous mineral preparations. The mean run length of the new type of tracks, which are practically identical to the tracks of division fragments, comprises about 10 μ. The resulting data corroborate the

Card 2/3

TUPITSYN, Anatoliy Ivanovich, kand.tekhn.nauk, dotsent; SUYARKO, Sergey Vasil'yevich, aspirant

Use of nonlinear stabilization in electric drives. Izv. vys. ucheb. zav; elektromekh. 3 no.8:104-110 '60. (MIRA 13:9)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy Khar'kovskogo politekhnicheskogo instituta.
(Electric driving) (Automatic control)

KUKLES, I.S.; SUYARSHAYEV, A.M.

Generalized method of Frommer. Izv. vys. ucheb. zav.; mat. no. 3:173-187 '60. (MIRA 13:12)

1. Uzbekskiy gosudarstvennyy universitet imeni Alishera Navoi i Institut matematiki imeni Romanovskogo AN UzSSR.
(Differential equations)

34854 R

S/166/60/000/004/001/006
B112/B202

16.3400

AUTHORS: Kukles, I. S., Corresponding Member of the Academy of Sciences UzSSR, Suyarshayev, A. M.

TITLE: Generalization of the method of Frommer for equations with semianalytic right sides

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 4, 1960, 11-24

TEXT: The authors consider the differential equation (1): $\psi(x)dy/dx = a_0 y^n + y^{n-1}\alpha_1(x) + y^{n-2}\alpha_2(x) + \ldots + \alpha_n(x)$, where a_0 is a constant differing from zero; $\alpha_1, \alpha_2, \ldots, \alpha_n$ functions vanishing in the origin which are differentiable for small positive x, $\psi(x)$ is a continuous function which fulfills the conditions $\psi(x) > 0$ and $\int_0^x du/\psi(u) = \infty$ for small positive x. The authors attempted to determine the set of

Card 1/3

Generalization of the method of ...

characteristics of (1) passing through the origin. They pay special attention to the problem of whether this set is empty, finite or infinite. If the functions $\alpha_i(x)$ and $\psi(x)$ are analytic functions, this problem can be solved by the method of M. Frommer (UMN, 194[illegible], v. 9). A new method is applied to the case concerned which is called generalized Frommer's method. It consists in the following construction of the set of characteristics: the "coefficients" $\varphi_i(x)$ of a certain normal representation

$$\psi(x)dy/dx = a_0 y^n + \varphi_1(x)y^{n_1} + \varphi_2(x)y^{n_2} + \ldots + \varphi_s(x) + R(x, y) \text{ of (1)}$$

determine the functions: $\omega_{ij} = |\varphi_j/\varphi_i|^{\frac{1}{n_i - n_j}}$, $\Omega_{ij} = \omega_{ij}/\omega^*$, among which the characteristic functions occur as functions with minimum order of magnitude. The authors derive three lemmas concerning the order of magnitude of the characteristic functions which are related to the problem concerned. There are 4 Soviet-bloc references.

Card 2/3

SUYARSHAYEV, A. M.

Cand Phys-Math Sci - (diss) "Generalized method of Frommer." Samarkand, 1961. 11 pp; (Ministry of Higher and Secondary Specialist Education Uzbek SSR, Tashkent State Univ imeni V. I. Lenin); 250 copies; price not given; bibliography at end of text (13 entries); (KL, 7-61 sup, 220)

88559

S/020/61/136/001/004/037
C111/C222

16.3400

AUTHORS: Kukles, I.S., and Suyarshayev, A.M.

TITLE: Frommer's Generalized Method

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 1, pp.29-32

TEXT: The authors consider

$$(1)\quad \frac{dy}{dx} = \frac{\alpha_o y^m + \alpha_1(x)y^{m-1} + \alpha_2(x)y^{m-2} + \ldots + \alpha_m(x)}{\beta_o y^n + \beta_1(x)y^{n-1} + \beta_2(x)\, y^{n-2} + \ldots + \beta_n(x)}$$

where α_o, β_o are constants, $\alpha_o^2 + \beta_o^2 \neq 0$; $\alpha_i(x)$, $\beta_i(x)$ differentiable for small $x > 0$ and of a constant sign, $\alpha_i(0) = \beta_i(0) = 0$, $i = \overline{1,m}$ and $i = \overline{1,n}$, respectively. If all $\alpha_i(x) \equiv 0$, $i = \overline{1,m}$ then let at least one $\beta_j(x) \not\equiv 0$.

Putting $y = u\omega(x)$, where $\omega(x)$ is differentiable for small $x > 0$ then one obtains

$$(2)\quad \frac{du}{dx} = \frac{P(x,u)}{Q(x,u)}$$

Card 1/6

Frommer's Generalized Method

$$= \left[(j-1)\int_{x_0}^{x}\left|\frac{\alpha_i}{\beta_j}\right|dx\right]^{\frac{1}{i-j}}, \quad \omega_{ii'} = \exp\left[\int_{x_0}^{x}\left|\frac{\alpha_i}{\beta_i}\right|dx\right]$$

Let $\gamma_j = \alpha_j \omega^{m-j-1}$ (or $\gamma_{j'} = \beta_j \omega^{m-j-2}\omega'$) lie at the right side of $\gamma_i = \alpha_i \omega^{m-i-1}$ (or $\gamma_{i'} = \beta_i \omega^{m-i-2}\omega'$) if $j > i$; let $\gamma_{i'}$ lie at the right side of γ_i. Furthermore: let ω_{ik} lie at the right side of ω_{ij} if $k > j$; let $\omega_{ik'}$ lie at the right side of ω_{ik} etc. Let γ_i (or $\gamma_{i'}$) be the utmost left element $\gamma \neq 0$. Considering the functions $\omega_{ii'}$, $\omega_{i,i+1}$, $\omega_{i,(i+1)'}$,....., ω_{im} (or $\omega_{i',i+1}$, $\omega_{i',(i+1)'}$, $\omega_{i',i+2}$,... $\omega_{i'm}$) then that one of them is called the first characteristic function which has the least order of smallness. If $\overline{\omega}_{ij}$ (or $\overline{\omega}_{i'j'}$) is the first characteristic function then the functions

Card 3/6

88559

Frommer's Generalized Method

S/020/61/136/001/004/037
C111/C222

$= \left[(j-1)\int_{x_0}^{x}\left|\frac{\alpha_i}{\beta_j}\right|dx\right]^{\frac{1}{i-j}}$, $\omega_{ii'} = \exp\left[\int_{x_0}^{x}\left|\frac{\alpha_i}{\beta_i}\right|dx\right]$

Let $\gamma_j = \alpha_j \omega^{m-j-1}$ (or $\gamma_{j'} = \beta_j \omega^{m-j-2}\omega'$) lie at the right side of $\gamma_i = \alpha_i \omega^{m-i-1}$ (or $\gamma_{i'} = \beta_i \omega^{m-i-2}\omega'$) if $j > i$; let $\gamma_{i'}$ lie at the right side of γ_i. Furthermore: let ω_{ik} lie at the right side of ω_{ij} if $k > j$; let $\omega_{ik'}$ lie at the right side of ω_{ik} etc. Let γ_i (or $\gamma_{i'}$) be the utmost left element $\gamma \neq 0$. Considering the functions $\omega_{ii'}$, $\omega_{i,i+1}$, $\omega_{i,(i+1)'}$,...., ω_{im} (or $\omega_{i',i+1}$, $\omega_{i',(i+1)'}$, $\omega_{i',i+2}$,... $\omega_{i'm}$) then that one of them is called the first characteristic function which has the least order of smallness. If $\overline{\omega}_{ij}$ (or $\overline{\omega}_{i'j'}$) is the first characteristic function then the functions

Card 3/6

$\omega_{jj'}$, $\omega_{j,j+1}$, $\omega_{j,(j+1)}, \ldots, \omega_{jm}$ are considered. That one of them which has the least order of smallness is called the second characteristic function etc . The functions ω_{kl} , $\omega_{kl'}$, and $\omega_{k'l'}$ are called ordinary, the function $\omega_{kk'}$ is called singular.

The total number of characteristic functions is $\leq m$. The order of smallness of the i-th characteristic function is greater than that of the (i-1)-st.

Theorem 1 : Every solution $y(x)$ of (1) defined in the right halfplane and vanishing in the origin, has the order of smallness of a characteristic function.

If the characteristic function ω is ordinary then (2) has the form

$$(4) \qquad \frac{du}{dx} = \frac{N(u) + \epsilon(x,u)}{k(u)[N_1(u) + \epsilon_1(x,u)]} ,$$

where $N(u)$, $N_1(u)$ are polynomials ; $\epsilon(x,u)$, $\epsilon_1(x,u)$, $k(x)$ are continuous functions vanishing with x, and $\int_0^x \frac{dx}{k(x)} = \infty$

Card 4/6

Theorem 2 : If the order of smallness of the solution $y(x)$ of (1) is identical with the order of an ordinary characteristic function $\overline{\omega}$ then the measure of smallness of this solution equals one of the real roots of the equation $N(u) = 0$ which are different from zero.
If $\overline{\omega}$ is a singular characteristic function then (2) has the form

$$(4') \qquad \frac{du}{dx} = \frac{N_2(u) + \varepsilon(x,u)}{\lambda(u)\left[N_1(u) + \varepsilon_1(x,u)\right]},$$

where N_2 , N_1 are polynomials, $\varepsilon(x,u)$, $\varepsilon_1(x,u)$ are continuous functions vanishing with x ; $\lambda(x)$ is continuous for small $x > 0$ but for $x = 0$ it may have a jump.
Theorem 3 : If $\overline{\omega}_{kk'}$ is a singular characteristic function then three cases are possible : 1) $\alpha_k(x)$ and $\beta_k(x)$ have different signs; 2) $\alpha_k(x)$ and $\beta_k(x)$ have equal signs, where

(5) $\int_0^x \frac{dx}{\lambda(x)}$

Card 5/6

88559
S/020/61/136/001/004/037
C111/C222

diverges; 3) $\alpha_k(x)$ and $\beta_k(x)$ have equal signs where (5) converges. In the case 1) (1) has no solutions with the order of smallness of $\overline{\omega}_{kk'}$ in the right halfplane. In the case 2) there exist such solutions only then if their measures of smallness are equal to the real roots of $N_2(u) = 0$ which are different from zero. In the case 3) there exist infinitely many solutions with the order of smallness of $\omega_{kk'}$, and every solution has its own measure of smallness (singular case).
There are 4 references: 3 Soviet and 1 German.
[Abstracter's note : There are several misprints in the formulas]

ASSOCIATION: Uzbekskiy gosudarstvennyy universitet imeni Alishera Navoi (Uzbekskaya State University imeni Alisher Navoi)
PRESENTED: July 8, 1960, by I.G. Petrovskiy, Academician
SUBMITTED: June 21, 1960

LOTAREV, V.I., slesar' (Voronezh); SUYATINOV, N.G. (Voronezh);
ZAIONCHKOVSKIY, I.V. (Lyubertsy)

Efficiency suggestions made in the welding and assembly trust.
Stroi. truboprov. 8 no.1:22-23 Ja '63. (MIRA 16:5)
(Gas distribution--Equipment and supplies)

AKSENOV, I.Ya.: SUYAZOV, I.G.; KASHNIKOV, V.K., redaktor.

[Manual for studying the technical regulations for the operation of Soviet railroads] Posobie dlia izucheniia pravil tekhnicheskoi ekspluatatsii zheleznykh dorog SSSR. 3-e izd. Moskva, Gos. transp. zhel-dor. izd-vo, 1945. 395 p. (MLRA 8:8)
(Railroads--Management)

AKSENOV, I.Ya.; SUYAZOV, I.G.; DIUGACH, B.A., red.; KHITROV, P.A., tekhn. red.

[Aid for the study of the regulations for the construction and operation of railroads in the U.S.S.R.] Posobie dlia izucheniia pravil tekhnicheskoi ekspluatatsii zheleznykh dorog SSSR. Moskva, Gos. transp. zhel.-dor. izd-vo, 1947. 479 p. (MIRA 14:8)
(Railroad engineering)

SUIAZOV, I.

Strogo vypolniat' pravila tekhnicheskoi eksploatatsii [zheleznykh dor:.]. [To follow strictly the rules for technical exploitation of railroads]. (Zhel-dor. transport, no. 2, 1947, p. 17-28).

DLC: HE7.Z5

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassfied.

SUKAZOV, I. G.

Zheleznodorozhnye perevozki v mezhdunarodnykh soobshcheniiakh. [International railroad freight traffic]. Moskva, Gos. transp. zhel-dor. izd-vo, 1949. 174 p.
DLC: HE2457.S8

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

MATROSOV, I.K., laureat Stalinskoy premii; YEGORCHENKO, V.F.; KARVATSKIY, B.L.; AGAFONOV, M.I.; KRYLOV, V.I.; PEROV, A.N.; KRUTITSKIY, V.F.; SUYAZOV, I.G.; TIKHONOV, P.S., red.; KHITROV, P.A., tekhn.red.

[Automatic brakes; installation, operation, maintenance, and repair] Avtotormoza; ustroistvo, upravlenie, obsluzhivanie i remont. Izd.4., ispr. i dop. Moskva, Gos.transp.zhel-dor.izd-vo, 1951. 253 p. (MIRA 12:11)

(Brakes)

SUYAZOV, I. G.

AKSENOV, I.Ya.; SUYAZOV, I.G.; GORODNICHEV, N.G., redaktor; KHATSKELEVICH, M.N., redaktor.

[Manual for learning rules of the technical operation of railroads in the Soviet Union] Posobie dlia izucheniia pravil tekhnicheskoi ekspluatatsii zheleznykh dorog Soiuza SSR. 7 izd., perer. i dop. Moskva, Gos. transp. i zhel-dor izd-vo, 1954. 614 p. (MLRA 7:8)
(Railroads)

AKSENOV, Ivan Yakovlevich; SUYAZOV, Ivan Grigor'yevich; KHATSKELEVICH, M.N., redaktor; TSARENKO, A.P., redaktor; VERINA, G.P., tekhnicheskiy redaktor

[A manual for the study of the principles of the technical operation of Soviet railroads] Posobie dlia izucheniia pravil tekhnicheskoi ekspluatatsii zheleznykh dorog Soiuza SSR. Izd. 2-oe, perer. i dop. Moskva, Gos. transp.zhel-dor. izd-vo, 1956. 482 p. (MLRA 10:1)
(Railroads--Management)

BENESHEVICH, I.I., kandidat tekhnicheskikh nauk; BOGIN, N.M., kandidat tekhnicheskikh nauk; BYKOV, Ye.I., inzhener; VLASOV, I.I., kandidat tekhnicheskikh nauk; GRITSEVSKIY, M.Ye., inzhener; GRUBER, L.O., inzhener GURVICH, V.G., inzhener; DAVYDOV, V.N., inzhener; YER-SHOV, I.M., kandidat tekhnicheskikh nauk; ZASORIN, S.N., kandidat tekhnicheskikh nauk; IVANOV, I.I., kandidat tekhnicheskikh nauk; KROTOV, L.B., inzhener; LAPIN, V.B., KRAUKLIS, A.A., inzhener; LASTOVSKIY, V.P., dotsent; LATUNIN, N.I., inzhener; MARKVARDT, K.G., professor, doktor tekhnicheskikh nauk; MAKHAYLOV, M.I., professor, doktor tekhnicheskikh nauk; NIKANOROV, V.A., inzhener; OSKOLKOV, K.N., inzhener; OKHOSHIN, L.I., inzhener; PARFENOV, K.A., dotsent, kandidat tekhnicheskikh nauk; PERTSOVSKIY, L.M., inzhener; POPOV, I.P., inzhener; PORSHNEV, B.G., inzhener; RATNER, M.P., inzhener; ROSSIYEVSKIY, G.I., dotsent, kandidat tekhnicheskikh nauk; RYKOV, I.I., kandidat tekhnicheskikh nauk; RYSHKOVSKIY, I.Ya., dotsent, kandidat tekhnicheskikh nauk; RYABKOV, A.Ya., professor [deceased]; TAGER, S.A., kandidat tekhnicheskikh nauk; KHAZEN, M.M., professor, doktor tekhnicheskikh nauk; CHERNYSHEV, M.A., doktor tekhnicheskikh nauk; EDIN, L.Ye., professor, doktor tekhnicheskikh nauk; YURENEV, B.N., dotsent; AKSENOV, I.Ya., dotsent, kandidat tekhnicheskikh nauk; ARKHANGEL'SKIY, A.S., inzhener; BARTENEV, P.V., professor, doktor tekhnicheskikh nauk; BERNGARD, K.A., kandidat tekhnicheskikh nauk; BOROVOY, N.Ye., dotsent, kandidat tekhnicheskikh nauk; BOGDANOV, I.A., inzhener; BOGDANOV, N.K., kandidat tekhnicheskikh nauk; VIRNICHENKO, N.G., dotsent, kandidat ekonomicheskikh nauk;

(Continued on next card)

BENESHEVICH, I.I.---(continued) Card 2.
VASIL'YEV, V.F.; GONCHAROV, N.G., inzhener; DMRIBAS, A.T., inzhener; DOBROSEL'SKIY, K.M., dotsent, kandidat tekhnicheskikh nauk; DLUGACH, B.A., kandidat tekhnicheskikh nauk; YEFIMOV, G.P., kandidat tekhnicheskikh nauk; ZEMBLINOV, S.V., professor, doktor tekhnicheskikh nauk; ZABELLO, M.L., kandidat tekhnicheskikh nauk; IL'IN, K.P., kandidat tekhnicheskikh nauk; KARETNIKOV, A.D., kandidat tekhnicheskikh nauk; KAPLUN, F.Sh., inzhener; KANSHIN, M.D.; KOCHNEV, V.P., professor, doktor tekhnicheskikh nauk; KOGAN, L.A., kandidat tekhnicheskikh nauk; KUCHURIN, S.F., inzhener; LEVASHOV, A.D., inzhener; MAKSIMOVICH, B.M., dotsent, kandidat tekhnicheskikh nauk; MARTYNOV, M.S., inzhener; MEDKL', O.M., inzhener; NIKITIN, V.D., professor, kandidat tekhnicheskikh nauk; PADNYA, V.A., inzhener; PANTELEYEV, P.I., kandidat tekhnicheskikh nauk; PETROV, A.P., professor, doktor tekhnicheskikh nauk; POVOROZHENKO, V.V., professor, doktor tekhnicheskikh nauk; PISKAREV, I.I., dotsent, kandidat tekhnicheskikh nauk; SERGEYEV, Ye.S., kandidat tekhnicheskikh nauk; SIMONOV, K.S., kandidat tekhnicheskikh nauk; SIMANOVSKIY, M.A., inzhener; SUYAZOV, I.G., inzhener; TALDAYEV, F.Ya., inzhener; TIKHONOV, K.K., kandidat tekhnicheskikh nauk; USHAKOV, N.Ya., inzhenr; USPENSKIY, V.K., inzhener; FEL'DMAN, E.D., kandidat tekhnicheskikh nauk; FERAPONTOV, G.V., inzhener; KHOKHLOV, L.P., inzhenr; CHERNOMORDIK, G.I., professor, doktor tekhnicheskikh nauk; SHAMAYEV, M.F., inzhener; SHAFIRKIN, B.I., inzhener; YAKUSHIN, S.I., inzhener; GRANOVSKIY, P.G., redaktor; TISHCHENKO, A.I., redaktor; ISAYEV, I.P., dotsent, kandidat tekhnicheskikh nauk, redaktor; KLIMOV, V.F., dotsent kandidat tekhnicheskikh

(Continued on next card)

BENESHEVICH, I.I.--- (continued) Card 3.

nauk, redaktor; MARKOV, M.V., inzhener, redaktor; KALININ, V.K., inzhener, redaktor; STEPANOV, V.N., professor, redaktor; SIDOROV, N.I., inzhener, redaktor; GERONIMUS, B.Ye., kandidat tekhnicheskikh nauk, redaktor; ROBEL', R.I., otvetstvennyy redaktor

[Technical reference manual for railroad engineers] Tekhnicheskii spravochnik zheleznodorozhnika. Moskva, Gos. transp.zhel-dor. izd-vo. Vol.10. [Electric power supply for railroads] Energosnabzhenie zheleznykh dorog. Otv.red. toma K.G.Markvardt. 1956. 1080 p. Vol.13. [Operation of railroads] Eksploatatsiia zheleznykh dorog. Otv. red. toma R.I.Robel'. 1956. 739 p. (MLRA 10:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Petrov) (Electric railroads) (Railroads--Management)

BUYER, Vasa (Ljubljana)

Group m. doing, and advantages of its introduction in electric
industr . ti. 1. Elektr vest 31 no.3/5: 80-88 Mr-My '64.

USSR / Virology. Human and Animal Viruses. General Problems. E

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5292.

Author : Stepanov, K. D.; Suyerbayeva, G. G.
Inst : Not given.
Title : Methods of Storage and Transportation of Sera for Virological Analysis.

Orig Pub: Kazansk. med. zh., 1957, No 2-3, 155.

Abstract: No abstract.

Card 1/1

12

S/138/62/000/001/002/009
A051/A126

AUTHORS: Gilyazetdinov, L.P.; Zuyev, V.P.; Bernshteyn, I.D.; Suyetenko, L.P.

TITLE: The production of active furnace carbon blacks from mixtures of petroleum and coal oils

PERIODICAL: Kauchuk i rezina, no. 1, 1962, 5 - 6

TEXT: Tests were carried out to determine the optimum composition of petroleum and coal oil mixtures and the production of active furnace carbon blacks. The experiments were made in a single-chamber cylindrical reactor with an internal diameter of 500 mm and 3.5 m in length. The reactor capacity was 25 kg/h. The experimental carbon blacks were analyzed according to physico-chemical methods and tested in vulcanizates based on CKC-30 AM (SKS-30 AM) (standard composition). Experimental results showed that the active furnace carbon black output, the total air consumption and the process temperature corresponded to the aromatization factor. The obtained relation points to the expediency of a wide introduction of the aromatization factor for characterizing the raw material and for correcting the production methods of the active furnace carbon blacks. Pe-

Card 1/2

S/138/62/000/001/002/009
A051/A126

The production of active furnace carbon blacks ....

troleum and coal oil mixtures are recommended. There is 1 table and 1 figure.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the Tire Industry)

Card 2/2

SALOV, B.S., inzh.; SUYETENKO, O.D., inzh.

Designing tube headers. Trudy VNIIKIMASH no.4:162-183 '61.
(MIRA 15:1)

(Heat exchangers)

USSR/Human and Animal Physiology (Normal and Pathological). T
Internal Secretion. Gonads.

Abs Jour: Ref Zhur-Biol., No 17, 1958, 79862.

Author : Suyetin, B. Ya
Inst :
Title : On the Reflex Effect of Folliculin.

Orig Pub: Tr. Buryat.-Mong. zoovet. in-ta, 1956, vyp. 10, 39-78.

Abstract: No abstract.

Card : 1/1

SAKHOVALER, Abram Yul'yevich; SUYETIN, Georgiy Georgiyevich; KAZAKOV, B.Ye., otvetstvennyy redaktor; ZARETSKIY, S.Ye., redaktor izdatel'stva; NADEINSKAYA, A.A., tekhnicheskiy redaktor

[Mechanization of preparatory operations abroad] Mekhanizatsiia prevedeniia podgotovitel'nykh vyrabotok za rubezhom. Moskva, Ugletekhizdat, 1956. 75 p. (MLRA 9:12)
(Coal mines and mining)

SAKHOVALER, G.G.; SUYETIN, G.G.; SIRIN, G.Ye., redaktor; PAVLYUCHENKO, D.N., redaktor; KOROVENKOVA, Z.A., tekhnicheskiy redaktor.

[Metal supports used in foreign mines; a collection of reports] Metallicheskaia shakhtnaia krep' za rubezhom; sbornik referatov. Sost. A.IU.Sakhovaler, G.G.Suetin. Moskva, Ugletekhizdat, 1956. 165 p. (Mine timbering) (MLRA 9:6)

BABOKIN, I.A.; SUYETIN, G.G.

Some data on research in manless coal mining in foreign countries.
Ugol' 36 no.4:52-57 Ap '61. (MIRA 14:5)
(Coal mines and mining—Research)
(Automation)

AYRUNI, Arsen Tigranovich, kand. tekhn. nauk; ALEKSEYEV, Viktor Borisovich; BURSHTEYN, Mark Aleksandrovich; GEYMAN, Leonid Mikhaylovich; GRABILIN, Yuriy Nikolayevich; KILIMOV, Sergey Leonidovich; SOSNOV, Vladimir Dmitriyevich; SENCHEVA, Valentina Ivanovna; SUYETIN, Georgiy Georgiyevich; FEYGIN, Lev Mikhaylovich; SHEVCHENKO, Vadim Dmitriyevich; KAZAKOV, B.Ye., otv. red. toma; TAYTS, T.L., red.; OSVAL'D, E.Ya., red. izd-va; MINSKER, L.I., tekhn. red.

[The coal industry of capitalist countries]Ugol'naia promyshlennost' kapitalisticheskikh stran. Moskva, Gos.nauchno-tekhn.izdvo lit-ry po gornomu delu. Vol.2.[Technology, mechanization, and organization of development workings]Tekhnologiia, mekhanizatsiia i organizatsii rabot pri provedenii podgotovitel'nykh gornykh vyrabotok. Otv. red. toma: B.E.Kazakov, V.D.Sosnov, G.G.Suetin. 1962. 351 p. (MIRA 16:2)

1. Moscow. TSentral'nyy institut tekhnicheskoy informatsii ugol'noi promyshlennosti. 2. TSentral'nyy institut tekhnicheskoy informatsii ugol'noy promyshlennosti, Moscow (for Suyetin, Sencheva). 3. Gosudarstvennyy proyektnyy institut po avtomatizatsii ugol'noy promyshlennosti (for Feygin). 4. Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (for Sosnov). 5. Vsesoyuznyy tsentral'nyy proyektnyy institut po proyektirovaniyu shakhtnogo stroitel'stva kamennougol'noy promyshlennosti (for Burshteyn, Shevchenko). 6. Gosudarstvennoye nauchno-tekhnicheskoye izdatel'stvo po ugol'noy promyshlennosti (for Geyman).

(Continued on next card)

SUYETIN, I., polkovnik

Engineering factors in a frontal encounter. Voen. vest. 40 no. 3:34-37 Mr '61. (MIRA 14:2)
(Military engineering)

ACC NR: AP6030134 (N) SOURCE CODE: UR/0120/66/000/004/0079/0083

AUTHORS: Derbunovich, L. V.; Raisov, Yu. A.; Suyetin, O. N.

ORG: Kharkov Polytechnic Institute (Khar'kovskiy politekhnicheskiy institut)

TITLE: A multichannel system for the time distribution of a signal

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1966, 79-83

TOPIC TAGS: time signal, time interval counter, delay circuit, circuit delay line, automatic control system, lamp, chronometer, time measurement / SM 37 lamp

ABSTRACT: A 20-channel system for the time distribution of a control signal has been developed. The distribution is accomplished by delaying the signal 2--10^4 microsec. Electromagnetic delay lines provide the delay up to 10 microsec with a minimum step of 0.1 microsec. Above 10 microsec a counter-pulse chronometer provides the delay. The combination allows 0.1 microsec steps while requiring a reference frequency oscillator for the counting pulses of only 100 kc. Three decades of the circuits are used for counting the reference pulses; three other counting decades and a pair of switches are used for checking the operation of the master decade and any of the 20 channels. The counting and logic part of the system contains a static ferrotransistor trigger and a coincidence gate which use transformers with cores having a rectangular "quasipermanently" magnetized hysteresis loop. The transistorized driven blocking oscillators at the output are triggered through a similar

Card 1/2

UDC: 621.374

ACC NR: AP6030134

transformer which permits easy matching. The counting decades use a 2-modulus counter and a 5-modulus ring counter with the counter state displayed on a panel by SM-37 incandescent lamps. The limiting absolute error is 10^{-6} sec and the relative error is 10^{-4}. The construction is unitized. One counter is used for all 20 channels of the system requiring 100-watt power. The delay is easily set by 5 switches, and each channel has 2 coaxial sockets at the output. Orig. art. has: 4 figures.

SUB CODE: 17/09/ SUBM DATE: 29Jul65/ ORIG REF: 005

Card 2/2

SUYETIN, O. M.

Suyetin, O. M. "The operation of a single-phase full-wave rectifier in a complex layout", Sbornik nauch.-tekhn. statey Khar'k. elektrotekhn. in-ta, Issue 7, 1948, p. 141-77.

So: U-3261, 1 April 53, (Letopis 'Zhurnal 'nykh Statey, No. 12, 1949).

SUYETIN, P. E.

"Optical Methods for the Measurement of Interdiffusion Coefficients of Gases."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

SUYETIN, P. K. PA 249T4

USSR/Mathematics - Polynomials 1 Jan 53

"Faber Polynomials for Regions with Nonanalytical Boundaries," P. K. Suyetin

DAN SSSR, Vol 88, No 1, pp 25-8

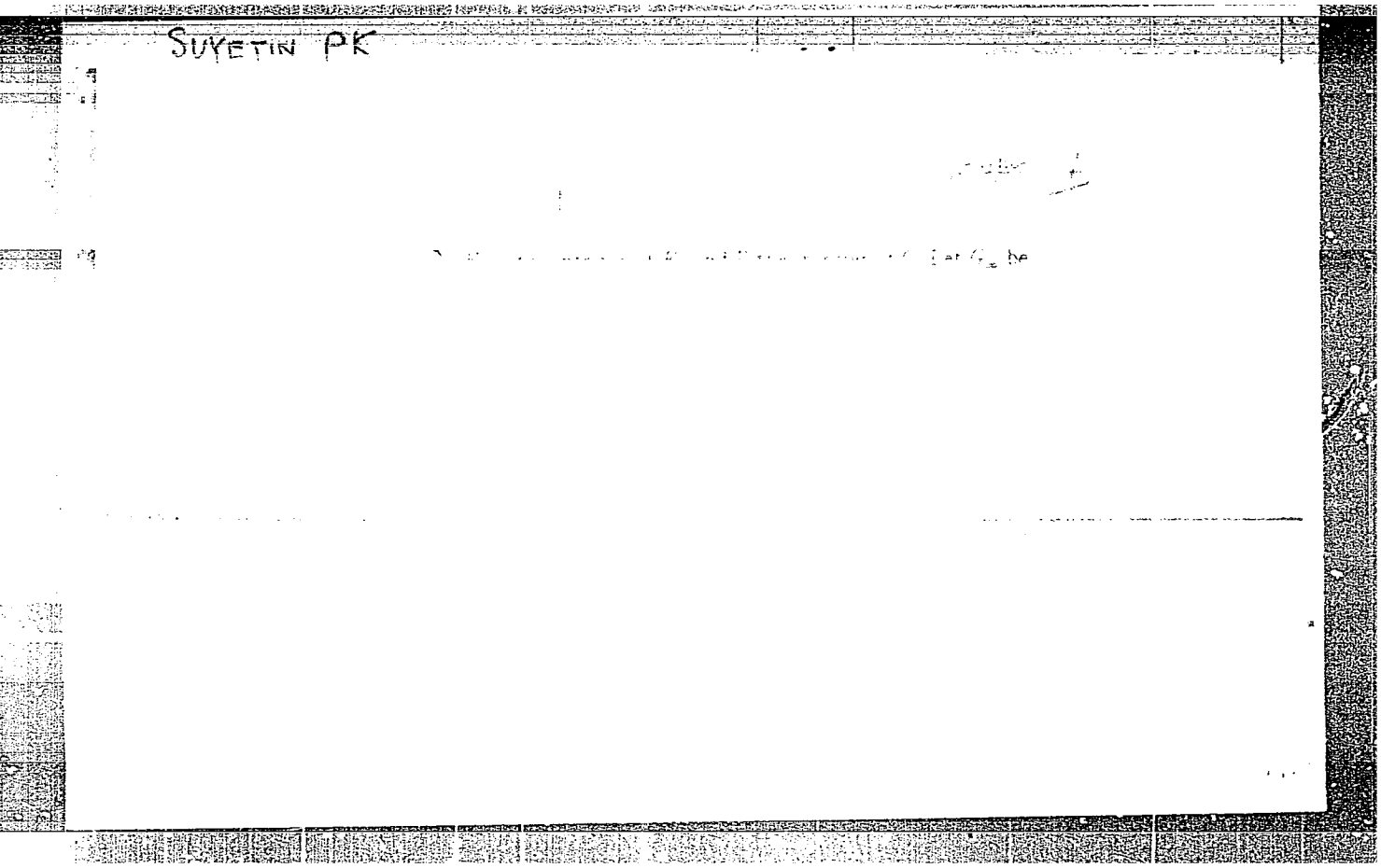
Discusses the problem concerning the conditions under which a function f(z) analytical in a singly-connected region G with rectifiable Jordan curve C would be expandable in Faber polynomials converging uniformly within region G. Cites A. I. Markushevich (Teoriya Analiticheskikh Funktsiy, 1950). Presented by Acad M. A. Lavrent'yev 4 Nov 1952.

249T4

SUYETIN, P.K.; LAVRENT'YEV, M.A., akademik.

Abelian and Tauberian theorems for series of Faber's polynomials. Dokl. AN SSSR 91. no.1:27-30 Jl '53. (MLRA 6:6)

1. Akademiya nauk SSSR (for Lavrent'yev). (Series) (Polynomials)



SUYETIN, P. K.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress* (Cont.) Moscow Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.

Card 32/80

*

SUYETIN, P.K.

Polynomials orthogonal with differentiable weight. Dokl.AN SSSR 106 no.5:788-791 F '56. (MLRA 9:7)

1.Ural'skiy kazakhskiy gosudarstvennyy pedagogicheskiy institut imeni A.S.Pushkina. Predstavleno akademikom M.A.Lavrent'yevym.
(Functions, Orthogonal)

SUYETIN, P.K.

Representation of analytical functions bb seriesin orthogonal polynomials. Dokl. AN SSSR 109 no.1:36-39 Jl-Ag '56. (MLRA 9:10)

1. Gosudarstvennyy pedagogicheskiy institut imeni A.S. Pushkina, G. Ural'sk. Predstavleno akademikom M.A. Lavrent'yevym.
(Series, Orthogonal) (Functions, Analytic)

20-114-3-13/60

AUTHOR: Suyetin, P. K.

TITLE: On the Polynomials With Differentiable Weight That Are Orthogonal on a Smooth Contour (O mnogochlenakh ortogonal'nykh po gladkomu konturu s differentsiruyemym vesom)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 3, pp. 498-501 (USSR)

ABSTRACT: The present paper investigates the dependence of the polynomials $\{P_x(z)\}$ ortho-normalized with the weight $n(z)$ on boundary Γ of a certain organic domain G, on the differential properties of the weight function and on the degree of smoothness of the boundary of domain. The generalized Faber polynomials $B_n(z)$ which are defined by the development

$$g\left[\Psi(w)\right]\Psi'(w)/(\Psi(w) - z) = \sum_0^\infty B_n(z)/w^{n+1},$$

$z \in G$, $|w| > 1$ are also examined. G_∞ is the supplement to $\overline{G}$ and the function $w = \Phi(z)$ represents the domain G_∞ on the supplement (?) of the circle of unit radius when the condi-

Card 1/3

20-114-3-13/60

On the Polynomials With Differentiable Weight That Are Orthogonal on a Smooth Contour

$$B_n(z) = g(z)\left[\Phi(z)\right]^n \left[1 + O(\ln n/n^{p+\alpha})\right]$$

is valid for the generalized Faber polynomials with $z \in \Gamma$. There are 4 references, all of which are Soviet.

ASSOCIATION: Ural Kazakh State Pedagogical Institute imeni A. S. Pushkin (Ural'skiy kazakhskiy gosudarstvennyy pedagogicheskiy institut im. A. S. Pushkina)

PRESENTED: December 11, 1956, by M. A. Lavrent'yev, Member of the Academy

SUBMITTED: December 8, 1956

Card 3/3

On Polynomials Orthogonal With Respect to Area SOV/20-126-5-7/69

smooth of order p, then to every closed set $F \subset G$ there exists a constant $C(F)$ so that for all n and all $z \in F$ it holds

$$|K_n(z)| \leq \frac{C(F)}{n^{p+\alpha}} .$$

A further analogous theorem is given.

The author thanks M.A. Lavrent'yev, Academician.

There are 3 Soviet references.

ASSOCIATION: Ural'skiy gosudarstvennyy pedagogicheskiy institut imeni A.S. Pushkina (Urals State Pedagogical Institute imeni A.S.Pushkin)

PRESENTED: March 4,1959, by M.A. Lavrent'yev, Academician
SUBMITTED: September 20, 1958

Card 2/2

66403

SOV/20-128-6-7/63

~~16(1)~~ 16.3000

AUTHOR: Suyetin,P.K.

TITLE: On the Interpolation of Analytic Functions

PERIODICAL: Doklady Akademii nauk SSSR,1959,Vol 128,Nr 6,pp 1125-1128 (USSR)

ABSTRACT: Let G be a finite domain with the boundary Γ ; let D be the complement of $\overline{G}$. Let $\{B_n(z)\}$ be generalized Faber-polynomials, corresponding to the domain G and a continuous weight function $g(z)$ analytic in D and different from zero. Let $w = \Phi(z)$ map the domain D onto $|w|>1$, $\Phi(\infty)=\infty$, $\Phi'(\infty)>0$; let $z = \Psi(w)$ be the reversion function. Let Γ be smooth, let $\Psi(w)$ have continuous derivatives in $|w|\geq 1$.

Theorem 1: If $f(z)$ is k times continuous differentiable in the closed domain G, if the k-th derivative satisfies the Lipschitz condition of the order β, if $g(z)$ and $\Psi(w)$ are 2 and 4 times, respectively, differentiable, then for the interpolation polynomial $L_n(z)$ with knots in the zeros of $B_{n+1}(z)$ in $\overline{G}$ it is satisfied uniformly:

$$(3) \qquad |f(z) - L_n(z)| \leq \frac{c_1 \ln n}{n^{k+\beta}} , \quad z \in \overline{G} .$$

Card 1/2

6(-).6(2)

AUTHOR: Suyetin, P.K. SOV/20-129-1-7/6

TITLE: Some Asymptotic Properties of Polynomials

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 1, pp 30-33 (USSR)

ABSTRACT: The present paper continues the author's [Ref 2] earlier investigations. In [Ref 2] the author obtained asymptotic formulas for the generalized Faber polynomials and for polynomials orthogonal on a curve, where the remainder term is estimated in dependence on the differential properties of the weight function and on the smoothness of the curve. In the present paper the author investigates the exactness of these formulas and introduces the notion of the polynomial of best asymptotic approximation. 4 theorems are formulated. The author thanks the Academician M.A.Lavrent'yev.
There are 2 Soviet references.

ASSOCIATION: Ural'skiy pedagogicheskiy institut imeni A.S.Pushkina (Ural Pedagogical Institute imeni A.S.Pushkin)

PRESENTED: June 24, 1959, by M.A.Lavrent'yev, Academician

SUBMITTED: June 23, 1959

Card 1/1

32220
S/139/61/000/004/010/023
E032/E314

24.5300

AUTHORS: Suyetin, P.Ye. and Ivakin, B.A.

TITLE: On the diffusion thermal effect

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 4, 1961, 87 - 91

TEXT: The diffusion process consists of the transport of both matter and heat. The transport of heat gives rise to a temperature gradient and a nonuniform heating of the diffusing mixture, even though the average temperature of the mixture remains constant. If the temperature gradients and the concentrations are small and the pressure gradient and macroscopic motion of the mixture can be neglected, the temperature and concentration distributions are described by the following linear equations:

$$\frac{\partial c}{\partial t} = D\left(\Delta c + \frac{K_T}{T}\Delta T\right) \qquad (1)$$

Card 1/6

On the diffusion thermal effect

and

$$\frac{\partial T}{\partial t} - \frac{K_T}{C_p}\left(\frac{\partial \mu}{\partial c}\right)_{P.T.} \frac{\partial c}{\partial t} = \chi \Delta T \qquad (2)$$

where c is the concentration, defined as the ratio of the mass of one of the components per unit volume to the total mass of the mixture per unit volume,
D is the diffusion coefficient,
T is the absolute temperature,
K_T is the thermal-diffusion ratio,
μ is the chemical potential,
χ is the temperature diffusivity, and
C_p is the specific heat at constant pressure.

If the diffusion-temperature gradient has a negligible effect on the mass transport, these equations reduce to:

Card 2/6 5

On the diffusion thermal effect

$$\frac{\partial c}{\partial t} = D\Delta c \qquad (3)$$

and

$$\frac{\partial T}{\partial t} - \frac{K_T}{C_p}\left(\frac{\partial \mu}{\partial c}\right)_{P,T} \frac{\partial c}{\partial t} = \chi \Delta T \qquad (4) .$$

The authors derive a solution of this set of equations subject to the following conditions. Two cylinders are filled with the mixture at the same pressure but the composition of the mixture in cylinder 1 is slightly different from that in cylinder 2 (Fig. 1). The diffusion process begins when the two cylinders are made coaxial. It is assumed that the initial concentration of the lighter component in the mixture in the lower cylinder is $c_o + \delta c_o$, while the concentration in the upper cylinder is $c_o - \delta c_o$. The initial temperature in both

Card 3/6 5

cylinders is T_o. It is shown that the final solution for the temperature difference $\Delta T = T - T_o$ is of the form:

$$\Delta T(y,t) = \frac{\alpha P \delta N_o D}{\lambda - C_p \rho D}\left[\operatorname{erf}\left(\frac{y}{\sqrt{2Dt}}\right) - \operatorname{erf}\left(\frac{y}{\sqrt{2\chi t}}\right)\right] \qquad (12)$$

[Abstracter's note: not all the symbols are explicitly defined.]

Fig. 2 shows a graph of ΔT_o as a function of time (seconds) for Ar-He with T_o = 285 °K, P = 740 mm, N_o = 0.20, δN_o = 0.10 and y = 4 cm. This curve was calculated from Eq. (12). The authors have measured the diffusion thermal effect, using the apparatus described in a previous paper (Ref. 2 - the authors and their team - ZhTF, 29, no. 8, 1058, 1959). It

Card 4/6 5

SUYETIN, P.K.

Direct and inverse theorems of the order of closest approximation of closed curves by means of lemniscates. Izv. AN Arm. SSR. Ser. fiz.-mat.nauk 14 no.4:57-60 '61. (MIRA 14:11)

1. Ural'skiy pedagogicheskiy institut imeni A.S. Pushkina.
(Approximate computation)
(Curves)

S/057/61/031/004/015/018
B125/B202

5.4130 (1273, 1228, 1043)

AUTHORS: Suyetin, P. Ye., Ivakin, B. A.

TITLE: Coefficients of mutual diffusion of some gases measured by the optical method

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 4, 1961, 499-501

TEXT: P. Ye. Suyetin, G. T. Shchegolev, R. A. Klestov (ZhTF, XXIX, 8, 1058, 1959) described methods of measuring the coefficients of mutual diffusion between gases and the apparatus. The present paper gives the results obtained with this apparatus and the objective "Industar-11" (focal length 75 cm). The theoretical values of the coefficients of reciprocal induction were calculated from formula

$$D_{12}=B\frac{T^{3/2}\left(\frac{M_1+M_2}{2M_1M_2}\right)^{1/2}}{P\sigma_{12}^2\Omega(T_{12}^*)(1-\Delta)}\cdot 10^{-4}, \qquad (1)$$

$$T_{12}^*=\frac{Tk}{\varepsilon_{12}}, \quad \varepsilon_{12}=\sqrt{\varepsilon_1\varepsilon_2}, \quad \sigma_{12}=\frac{1}{2}(\sigma_1+\sigma_2). \qquad (1)$$

Card 1/7